



Disparities in Nursing Home Quality

Selected Measures – United States, 2011

Disparities National Coordinating Center
Spring 2014

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The contents presented do not necessarily reflect CMS policy.*

Introduction

The U.S. health care system faces unprecedented challenges. While the overall life expectancy has improved in the Medicare population, racial and socioeconomic disparities in mortality, health status, access and quality of care have been widening. Many beneficiaries fail to receive treatments of proven benefit – a burden that falls most heavily on racial minorities and low-income Medicare populations. Health disparities not only inflict a significant level of illness, disability, and death on the nation; excess disease and death also impose a significant economic burden on society.¹⁻³ Moreover, it's not only who you are that matters; it's also where you live. As numerous studies from the Dartmouth Atlas reports have documented, income and race are important determinants of both the health care patients receive and of patients' health care outcomes.⁴ These disparities are particularly striking when examined across U.S. states and regions, nonetheless.

Purpose

While the health care quality improvement community has prioritized health disparities in acute care settings, such as hospital inpatient and ambulatory care, less attention was given to disparities in long-term care. This is despite the fact that a growing body of evidence documents pervasive racial, ethnic, and class disparities in long-term care in the United States.⁵⁻¹⁰ Furthermore, in the past decade, nursing homes have instituted various quality improvement programs and collaboratives, but it is unclear what effect they might have had on disparities. To determine what effect quality improvement efforts have had on disparities, we conducted analyses of the prevalence of selected nursing home clinical measures among long-stay nursing home residents.

A brief description of each selected quality measure is found in **Appendix A**. A more detailed snap shot on the specifications of nursing home quality measures and how these measures are calculated can be found in the MDS 3.0 QM User's Manual V8.0.¹¹

About this Report

To fulfill its contractual obligations to CMS, the Disparities National Coordinating Center (DNCC) was commissioned to analyze data and develop reports on the progress, achievements, results and recommended practices associated with the reduction of racial and ethnic health care disparities in the Quality Improvement Program's 10th statement of work (10SOW). The 2011 Disparities in Nursing Home Quality Measures National Report is an effort consistent with the scope of work and the mission of the DNCC: to promote communication and collaboration amongst Quality Improvement

Table of Contents

<i>Introduction</i>	1
<i>Data and Methods</i>	3
<i>Findings</i>	4
<i>References</i>	12
<i>Appendix A: Quality Measures Description</i>	13
<i>Appendix B: National Maps by State</i>	14
<i>Appendix C: Detailed National Tables</i>	22

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Organizations (QIOs) by crossing geopolitical lines within the nation and to achieve CMS goals of identifying, addressing and reducing disparities in health and health care. The DNCC achieves these goals by establishing and maintaining affinity groups and facilitating an open forum for sharing experiences, success stories and best practices.

In January 2014, the DNCC developed and distributed state-specific reports on the disparities in nursing home quality measures. These reports included national-level and state-specific data tables showing overall measure rates by quarter and for the 2011 annual average. The data also included stratified measure rates by categories of demographic variables.

Description of Report Sections

This report presents data on disparities in selected nursing home long-stay quality measures, as part of a series of national-level report deliverables to CMS.

Findings: In order to better portray and describe the data in the findings section, we designed the report layout to follow a chartbook format. Each of the eight nursing home quality measures under study is presented and discussed separately. Measure rates are calculated for the national average – as well as by selected demographic characteristics of nursing home residents, including age, race/ethnicity, gender, urban/rural location of the home and type of insurance coverage (i.e., Medicare/Medicaid). For each quality measure, all subgroup rates are displayed in a bar chart showing stratified measure rates and annotated error bars to indicate the 95% confidence interval (CI), followed by data highlights of key findings.

Appendix B: State-level data on long-term care quality are important for decision making aimed at shaping policy and improving program planning, financing, and delivery of care in skilled nursing facilities. Appendix B exhibits national choropleth maps by state to distinguish and characterize state-level variations.

Appendix C: includes the following detailed national-level tables:

- Table 1: Percent of high-risk residents with pressure ulcers by quarter and selected demographics, 2011
- Table 2: Percent of residents who were physically restrained by quarter and selected demographics, 2011
- Table 3: Percent of residents who have/had a catheter inserted and left in their bladder by quarter and selected demographics, 2011
- Table 4: Percent of residents with a urinary tract infection (UTI) by quarter and selected demographics, 2011
- Table 5: Percent of residents experiencing one or more falls with major injury by quarter and selected demographics, 2011
- Table 6: Percent of residents who have depressive symptoms by quarter and selected demographics, 2011
- Table 7: Percent of residents assessed and appropriately given the seasonal influenza vaccine by quarter and selected demographics, 2011
- Table 8: Percent of residents assessed and appropriately given the pneumococcal vaccine by quarter and selected demographics, 2011

Data and Methods

Data Source and Definitions

Two principal sources of data were used in the analysis and production of this report: the Long Term Care Minimum Data Set (MDS, version 3.0) resident or episode-level data and MDS assessment-level data for target dates between January 1, 2011 and December 31, 2011. The MDS resident-level data set contains clinical data collected on every resident of every Medicare- and Medicaid-certified nursing home in the country. The assessment-level data set includes all assessment records collected during calendar year 2011 and contains a set demographics and other resident characteristics. For purposes of this report, we calculated quality measures by the following resident characteristics:

Age Group	Based on age reported at the time of the assessment
Race/Ethnicity	Grouped into the following categories: <ul style="list-style-type: none">❖ American Indian or Alaska Native;❖ Asian, Native Hawaiian or Pacific Islander (NHPI);❖ Black, non-Hispanic;❖ Residents with multiple races; and❖ White, non-Hispanic residents
Gender	Male or female
Urban/Rural Area	The urban/rural status is that of the nursing home, not the resident. It indicates whether the facility is located in a Core Based Statistical Area (CBSA) designated as urban or rural.
Medicare/Medicaid Coverage	Medicare-Medicaid enrollment is based on the presence of a Medicare and/or Medicaid number in the assessment record. Other coverage types may include private health insurance, lifecare program, private pay, out of pocket, and other forms of payment.

Reporting Timeframes: We calculated quality measures by various demographics for resident episodes with target dates from 1/1/2011 to 12/31/2011 quarterly and for the stacked four quarters (2011 annual average).

Data Analysis Procedures

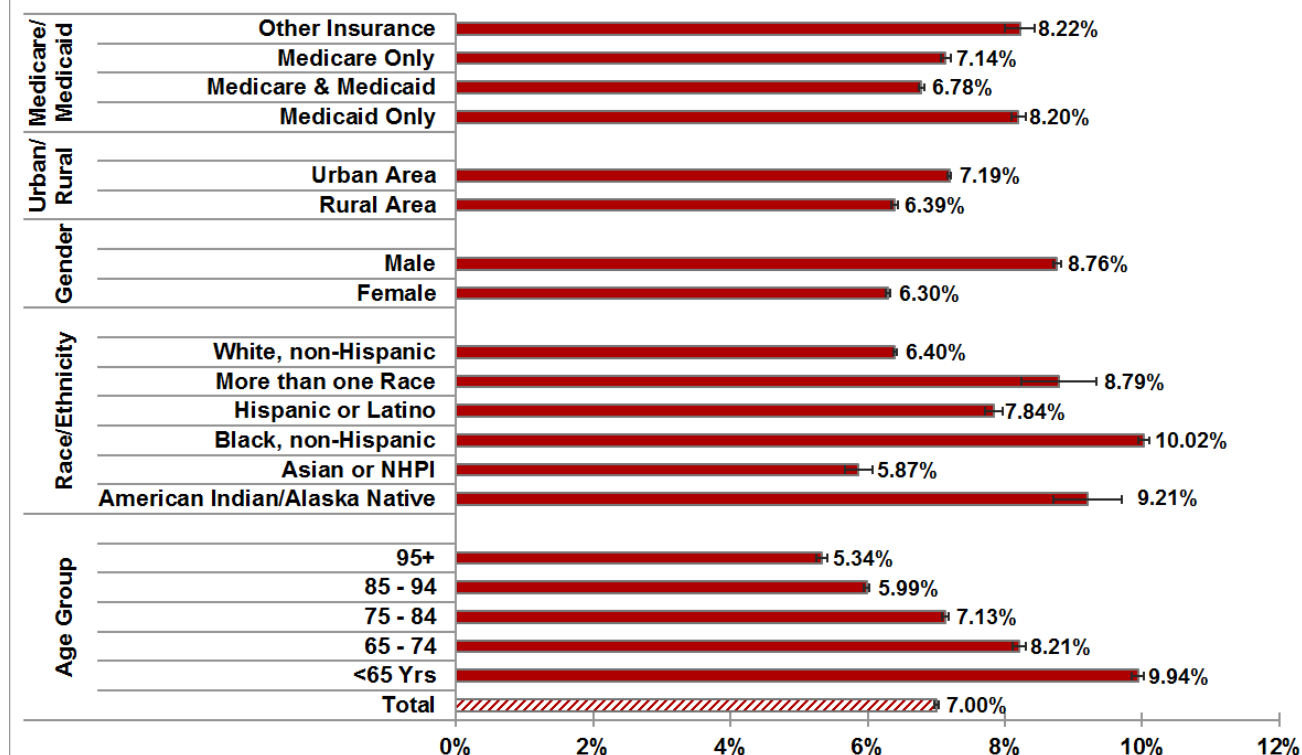
MDS resident- and assessment-level data sets were match-merged by “Resident Internal ID,” which in combination with “State Code,” is a unique key. Records that were not linked, as well as matched records that were missing demographic information, were excluded. Duplicate records were removed. Within each quarter, we selected a single record from the MDS Active Resident Episode Table (MARET) for each resident in a Medicare or Medicaid-certified nursing home.

SAS software (version 9.2)¹² was used for all data management procedures and for data analysis and report generation. We calculated quarterly and 2011 annual average measure rates (percents) and the 95% confidence interval (CI) for the annual average rate (confidence limits are not shown for quarterly rates). Differences between subgroup rates were considered statistically significant at the $p = 0.05$ level if the 95% confidence intervals did not overlap.

Findings

Pressure Ulcers

Figure 1: Percent of high-risk residents with pressure ulcers by selected demographic characteristics — United States, 2011

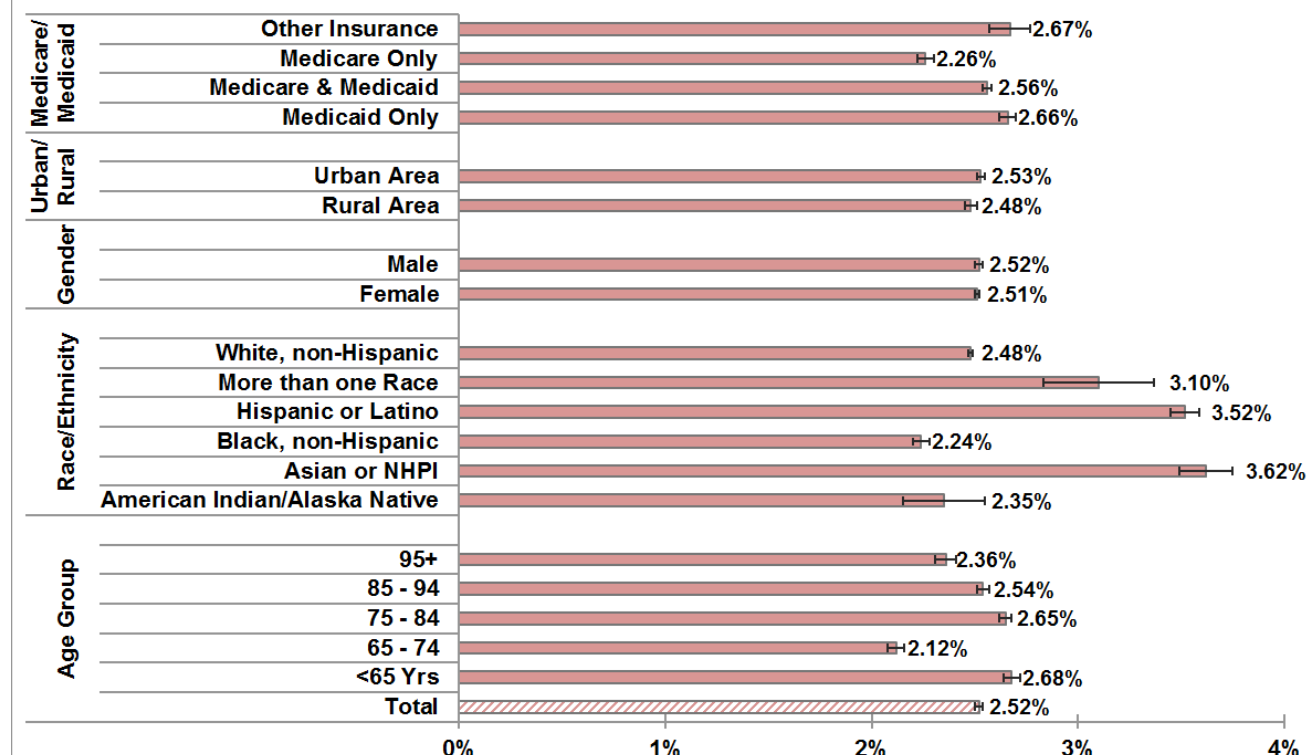


Data Highlights

- Overall, the percent of high risk, long-stay residents with pressure ulcers was 7.00% (95% CI, 6.97% - 7.03%) in 2011.
- The prevalence of pressure ulcers decreased as age increased. Residents less than 65 years had a rate of 9.94% (95% CI, 9.85% - 10.04%), whereas residents 95 years and older had a rate of 5.34% (95% CI, 5.26% - 5.42%).
- Black, non-Hispanic residents had a significantly higher pressure ulcer prevalence (10.02% [95% CI, 9.94% - 10.11%]) than other racial/ethnic subgroups. White residents had the lowest pressure ulcer rate at 6.40% (95% CI, 6.37% - 6.44%).
- Male residents had a significantly higher pressure ulcer rate (8.76% [95% CI, 8.70% - 8.82%]) than their female counterparts (6.30% [95% CI, 6.27% - 6.33%]).
- Residents in nursing homes located in urban areas had a significantly higher pressure ulcer rate (7.19% [95% CI, 7.16% - 7.22%]) than residents in nursing homes located in rural areas (6.39% [95% CI, 6.34% - 6.45%]).
- Medicaid-only residents had a significantly higher pressure ulcer rate (8.20% [95% CI, 8.10% - 8.30%]) than residents with other types of coverage.

Physical Restraints

Figure 2: Percent of residents with physical restraints by selected demographic characteristics — United States, 2011

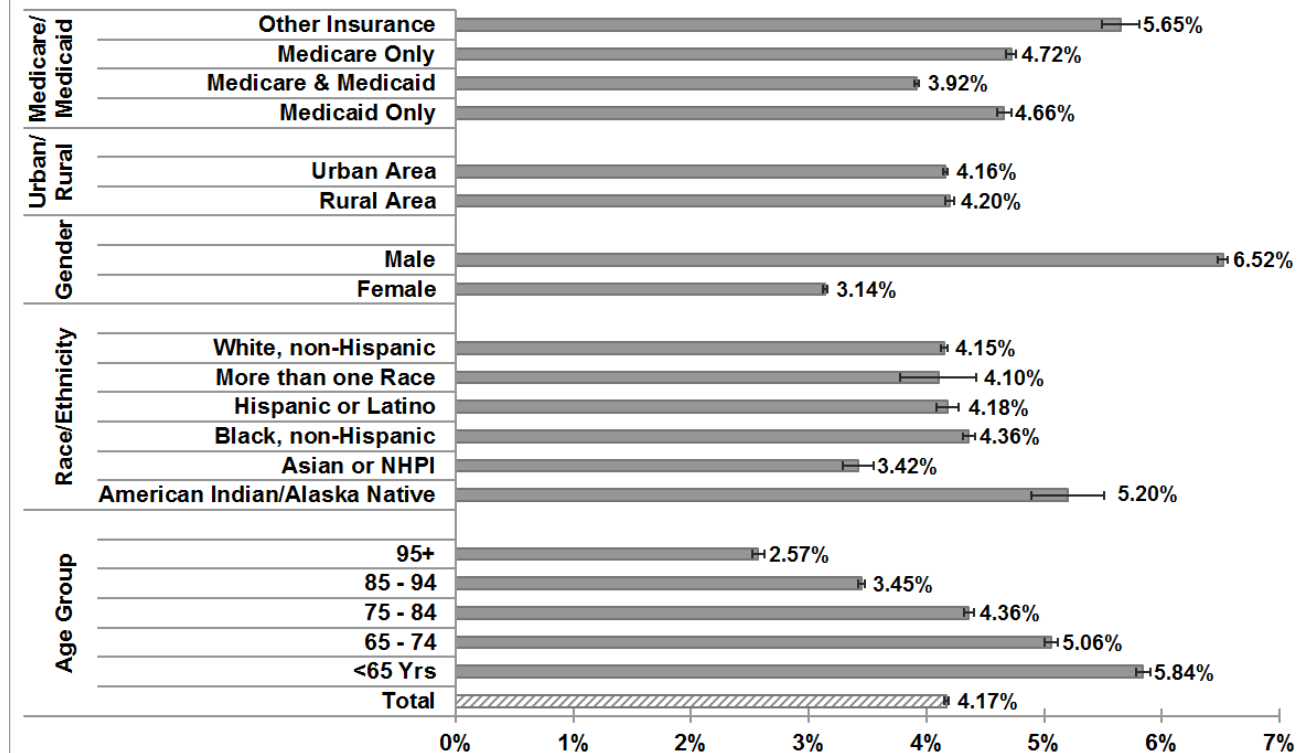


Data Highlights

- Nationally, the percent of long-stay residents who were physically restrained was 2.52% (95% CI, 2.50% - 2.53%) in 2011.
- Residents less than 65 years had the highest physical restraint rate at 2.68% (95% CI, 2.64% - 2.72%), followed by residents 75 - 84 years old (2.65% [95% CI, 2.62% - 2.68%]).
- The rate of physical restraints was highest among Asian or NHPI residents at 3.62% (95% CI, 3.49% - 3.75%), followed by Hispanic residents (3.52% [95% CI, 3.45% - 3.60%]). The rates for Asian/NHPI and Hispanic were significantly higher than that among white residents (2.48% [95% CI, 2.47% - 2.50%]).
- No gender differences in the rate of physical restraints were observed.
- Residents in nursing homes located in urban areas had a slightly higher physical restraints rate (2.53% [95% CI, 2.51% - 2.55%]) than residents in nursing homes located in rural areas (2.48% [95% CI, 2.45% - 2.50%]).
- Medicaid-only residents had a significantly higher physical restraint rate (2.66% [95% CI, 2.62% - 2.71%]) than residents with other types of coverage.

Urinary Catheter Use

Figure 3: Percent of residents who have a catheter inserted & left in their bladder by selected demographic characteristics — United States, 2011

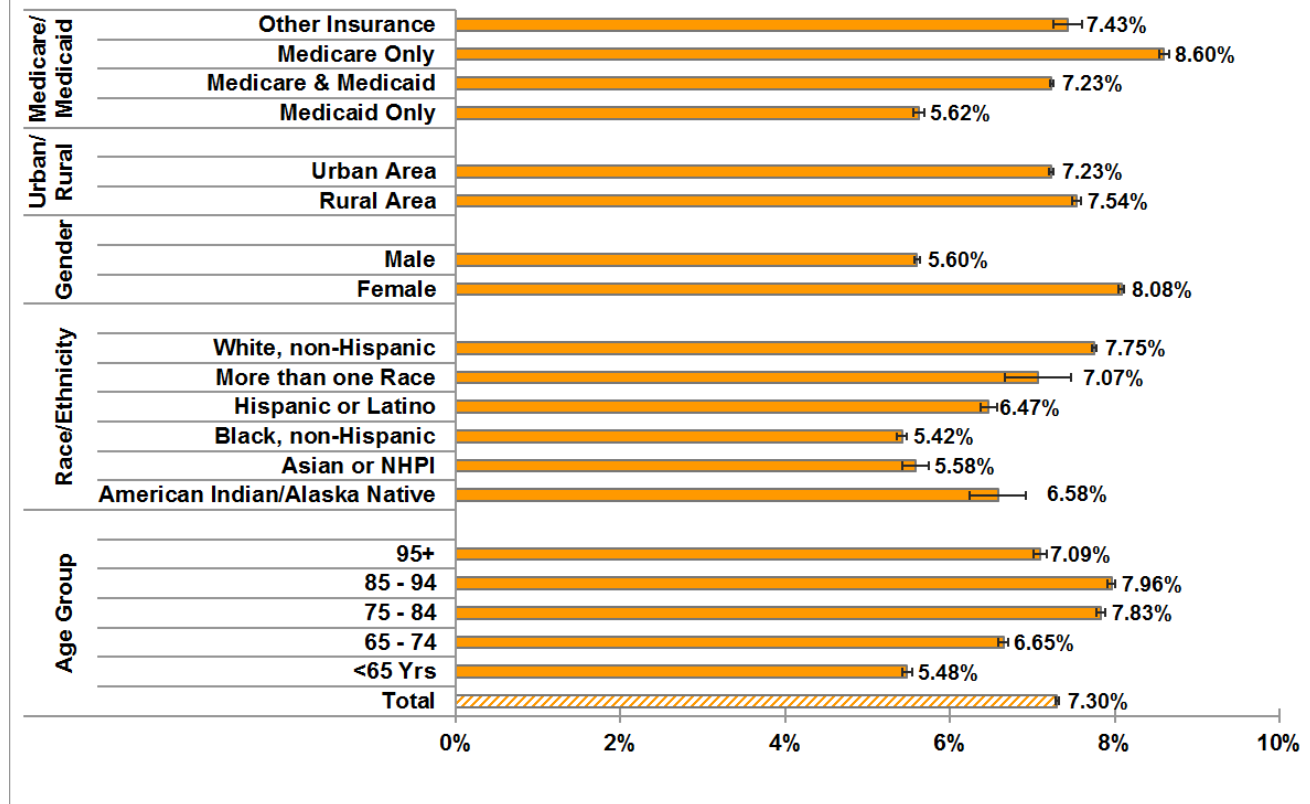


Data Highlights

- Overall, the percent of nursing home residents who had a catheter inserted and left in their bladder was 4.17% (95% CI, 4.15% - 4.19%) in 2011.
- The use of urinary catheter decreased as age increased. Residents less than 65 years had a rate of 5.84% (95% CI, 5.78% - 5.89%), whereas residents 95 years and older had a rate of 2.57% (95% CI, 2.52% - 2.62%).
- American Indian/Alaska Native residents had a significantly higher urinary catheter use rate (5.20% [95% CI, 4.89% - 5.51%]) than other racial/ethnic subgroups.
- Male residents had a significantly higher urinary catheter use rate (6.52% [95% CI, 6.48% - 6.56%]) than female residents (3.14% [95% CI, 3.12% - 3.15%]).
- Medicare-only residents had a significantly higher catheter use rate (4.72% [95% CI, 4.68% - 4.77%]) than residents with Medicare and Medicaid (3.92% [95% CI, 3.90% - 3.94%]).

Urinary Tract Infection (UTI)

Figure 4: Percent of residents with a urinary tract infection (UTI) by selected demographic characteristics — United States, 2011

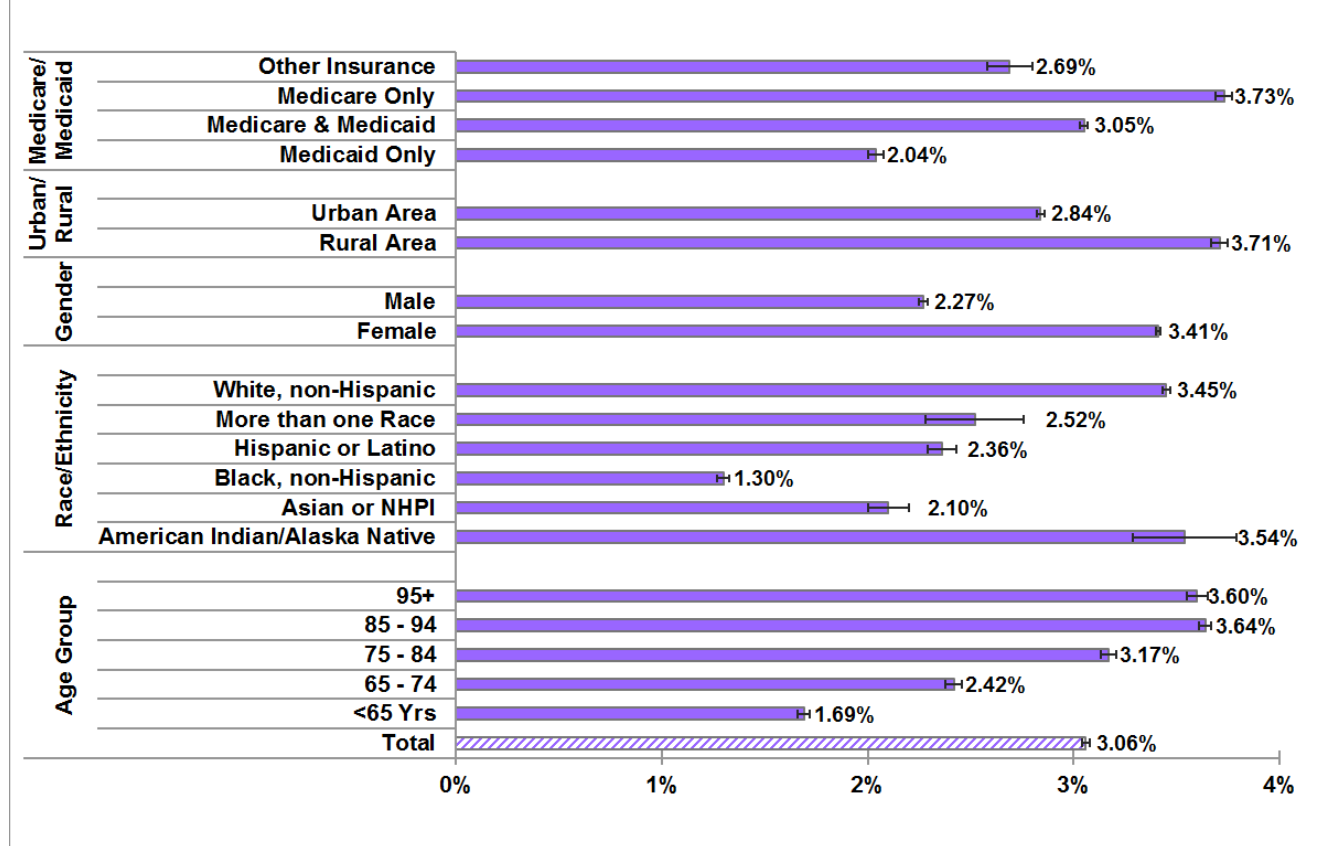


Data Highlights

- In 2011, the national rate of nursing home residents with UTI was 7.30% (95% CI, 7.28% - 7.33%).
- Residents 85 - 94 years old had the highest UTI rate at 7.96% (95% CI, 7.91% - 8.00%), followed by residents 75 - 84 years old (7.83% [95% CI, 7.78% - 7.88%]).
- White, non-Hispanic residents had a significantly higher UTI rate (7.75% [95% CI, 7.72% - 7.78%]) than other racial/ethnic subgroups.
- Female residents had a significantly higher UTI rate (8.08% [95% CI, 8.05% - 8.11%]) than their male counterparts (5.60% [95% CI, 5.57% - 5.64%]).
- Residents in nursing homes located in rural areas had a slightly higher UTI rate (7.54% [95% CI, 7.49% - 7.59%]) than residents in nursing homes located in urban areas (7.23% [95% CI, 7.20% - 7.25%]).
- Medicare-only residents had a significantly higher UTI rate (8.60% [95% CI, 8.54% - 8.66%]) than residents with other types of coverage.

Falls with Major Injury

Figure 5: Percent of residents experiencing 1 or more falls with major injury by selected demographic characteristics — United States, 2011

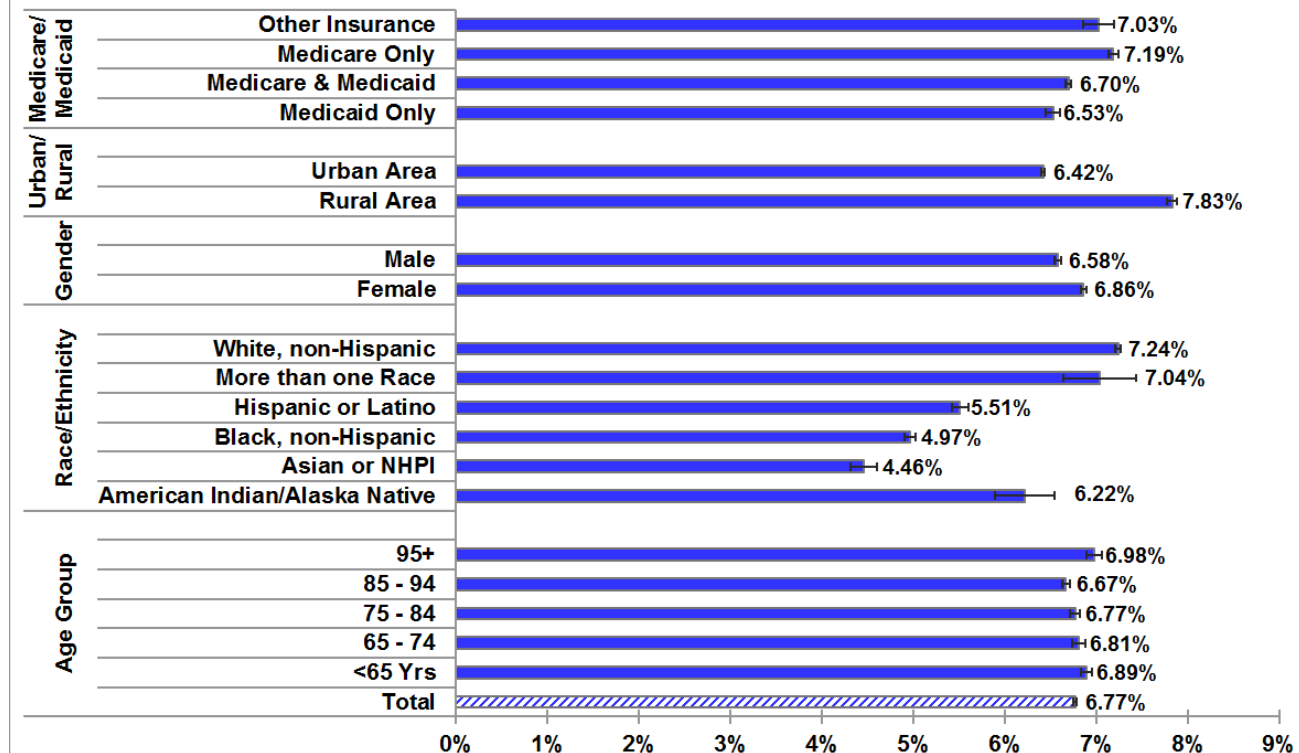


Data Highlights

- Overall, the percent of long-stay residents who experienced one or more falls with major injury was 3.06% (95% CI, 3.04% - 3.07%) in 2011.
- The risk of falls increased as age increased. Residents less than 65 years had a fall rate of 1.69% (95% CI, 1.66% - 1.72%), whereas residents 95 years and older had a rate of 3.60% (95% CI, 3.55% - 3.66%).
- American Indian/Alaska Native residents had the highest fall rate at 3.54% (95% CI, 3.29% - 3.79%), followed by white residents at 3.45% (95% CI, 3.43% - 3.47%).
- Female residents had a significantly higher fall rate (3.41% [95% CI, 3.40% - 3.43%]) than their male counterparts (2.27% [95% CI, 2.25% - 2.29%]).
- Residents in nursing homes located in rural areas had a significantly higher fall rate (3.71% [95% CI, 3.67% - 3.74%]) than residents in nursing homes located in urban areas (2.84% [95% CI, 2.82% - 2.86%]).
- Medicare-only residents had a higher fall rate (3.73% [95% CI, 3.69% - 3.77%]) than residents with other types of coverage.

Depressive Symptoms

Figure 6: Percent of residents who have depressive symptoms by selected demographic characteristics — United States, 2011

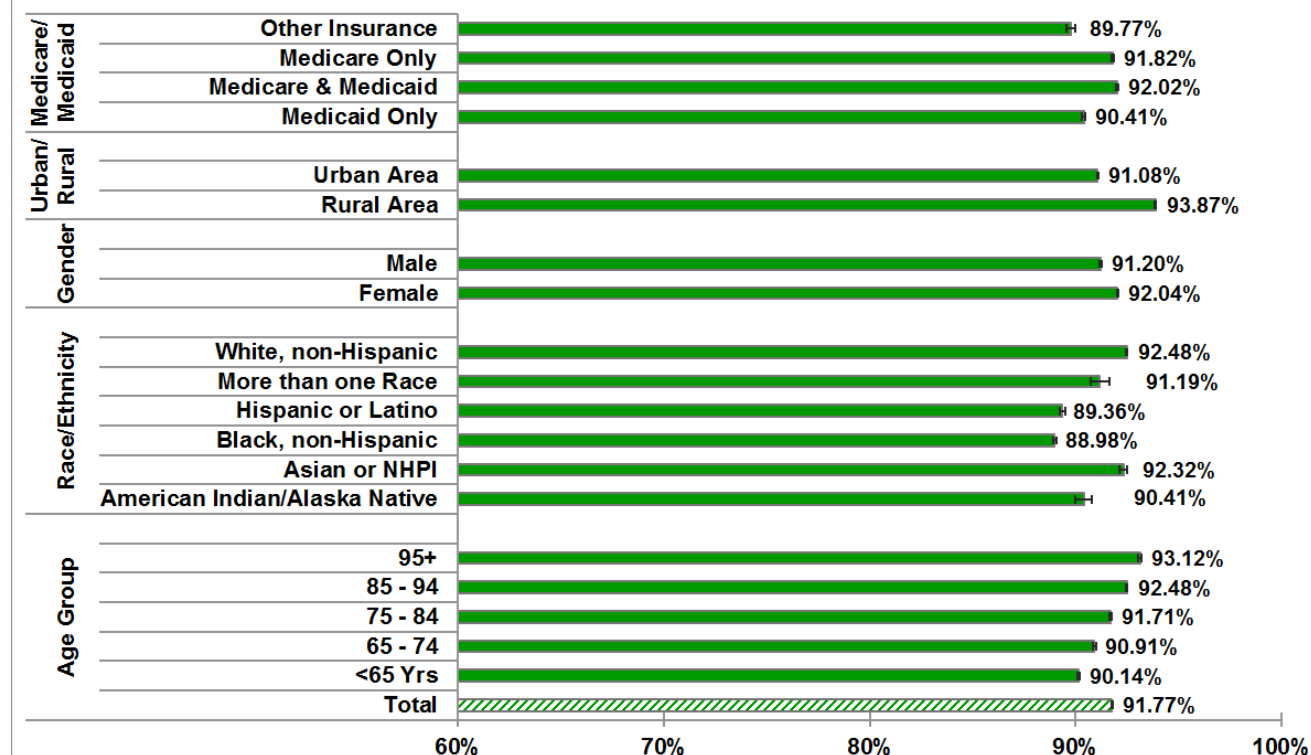


Data Highlights

- Overall, the percentage of nursing home residents who had depressive symptoms was 6.77% (95% CI, 6.75% - 6.80%) in 2011.
- No differences in the rate of depressive symptoms were observed by age group.
- White, non-Hispanic residents had a higher depressive symptoms rate at 7.24% (95% CI, 7.21% - 7.26%) than other racial/ethnic subgroups.
- Female residents had a slightly higher depressive symptom rate (6.86% [95% CI, 6.83% - 6.89%]) than male residents (6.58% [95% CI, 6.54% - 6.62%]).
- Residents in nursing homes located in rural areas had a significantly higher depressive symptoms rate (7.83% [95% CI, 7.78% - 7.88%]) than residents in nursing homes located in urban areas (6.42% [95% CI, 6.40% - 6.45%]).
- Medicare-only residents had significantly a higher depressive symptoms rate (7.19% [95% CI, 7.14% - 7.25%]) than residents with other types of coverage.

Influenza Vaccination

Figure 7: Percent of residents assessed and appropriately given the seasonal influenza vaccine by selected demographic characteristics — United States, 2011

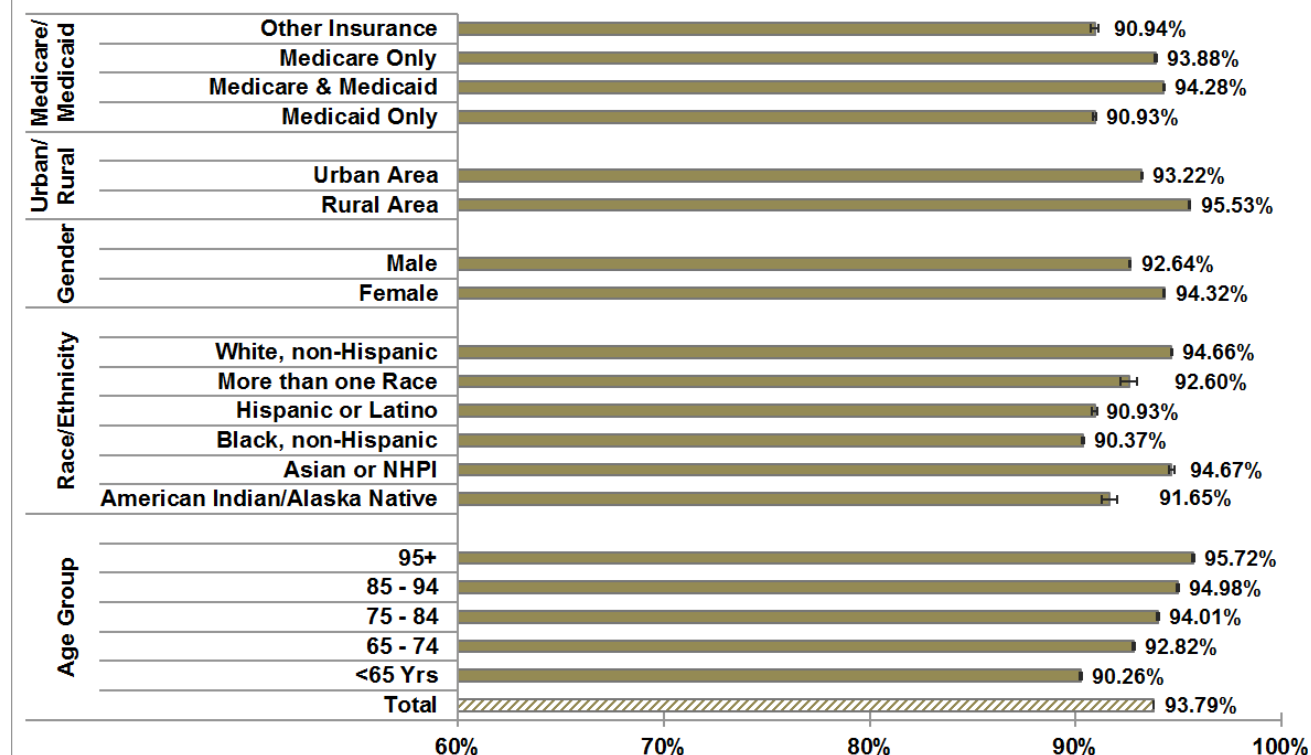


Data Highlights

- Overall, the percent of nursing home residents who were assessed and appropriately given the seasonal influenza vaccine was 91.77% (95% CI, 91.75% - 91.80%) in 2011.
- Influenza vaccination rate increased as age increased. Residents less than 65 years had an influenza vaccination rate of 90.14% (95% CI, 90.07% - 90.21%), whereas residents 95 years and older had a rate of 93.12% (95% CI, 93.04% - 93.20%).
- Influenza vaccination rate among black, non-Hispanic residents (88.98% [95% CI, 88.90% - 89.06%]) was significantly lower than that among white, non-Hispanic residents (92.48% [95% CI, 92.46% - 92.51%]).
- Male residents had a slightly lower influenza vaccination rate at 91.20% (95% CI, 91.15% - 91.24%) than female residents (92.04% [95% CI, 92.01% - 92.07%]).
- Residents in nursing homes located in urban areas had a significantly lower influenza vaccination rate at 91.08% (95% CI, 91.05% - 91.11%) than residents in nursing homes located in rural areas at 93.87% (95% CI, 93.83% - 93.92%).

Pneumococcal Vaccination

Figure 8: Percent of residents assessed & appropriately given the pneumococcal vaccine by selected demographic characteristics — United States, 2011



Data Highlights

- Overall, the percent of nursing home residents who were assessed and appropriately given the pneumococcal vaccine was 93.79% (95% CI, 93.77% - 93.81%) in 2011.
- Pneumococcal vaccination rate increased as age increased. Residents less than 65 years had a rate of 90.26% (95% CI, 90.19% - 90.33%), whereas residents 95 years and older had a rate of 95.72% (95% CI, 95.65% - 95.78%).
- Pneumococcal vaccination rate among black, non-Hispanic residents (90.37% [95% CI, 90.30% - 90.44%]) was significantly lower than that among all racial/ethnic subgroups.
- Male residents had significantly lower pneumococcal vaccination rate at 92.64% (95% CI, 92.60% - 92.68%) than female residents (94.32% [95% CI, 94.29% - 94.35%]).
- Residents in nursing homes located in urban areas had a significantly lower pneumococcal vaccination rate at 93.22% (95% CI, 93.19% - 93.25%) than residents in nursing homes located in rural areas (95.53% [95% CI, 95.49% - 95.56%]).

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12. SAS/STAT software, Version 9.2 of the SAS System for Windows. Copyright © 2002-2008. SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc., Cary, NC, USA.

Appendix A: Description of Nursing Home Quality Measures

Table A1. Brief description of nursing home long-stay quality measures used in this report

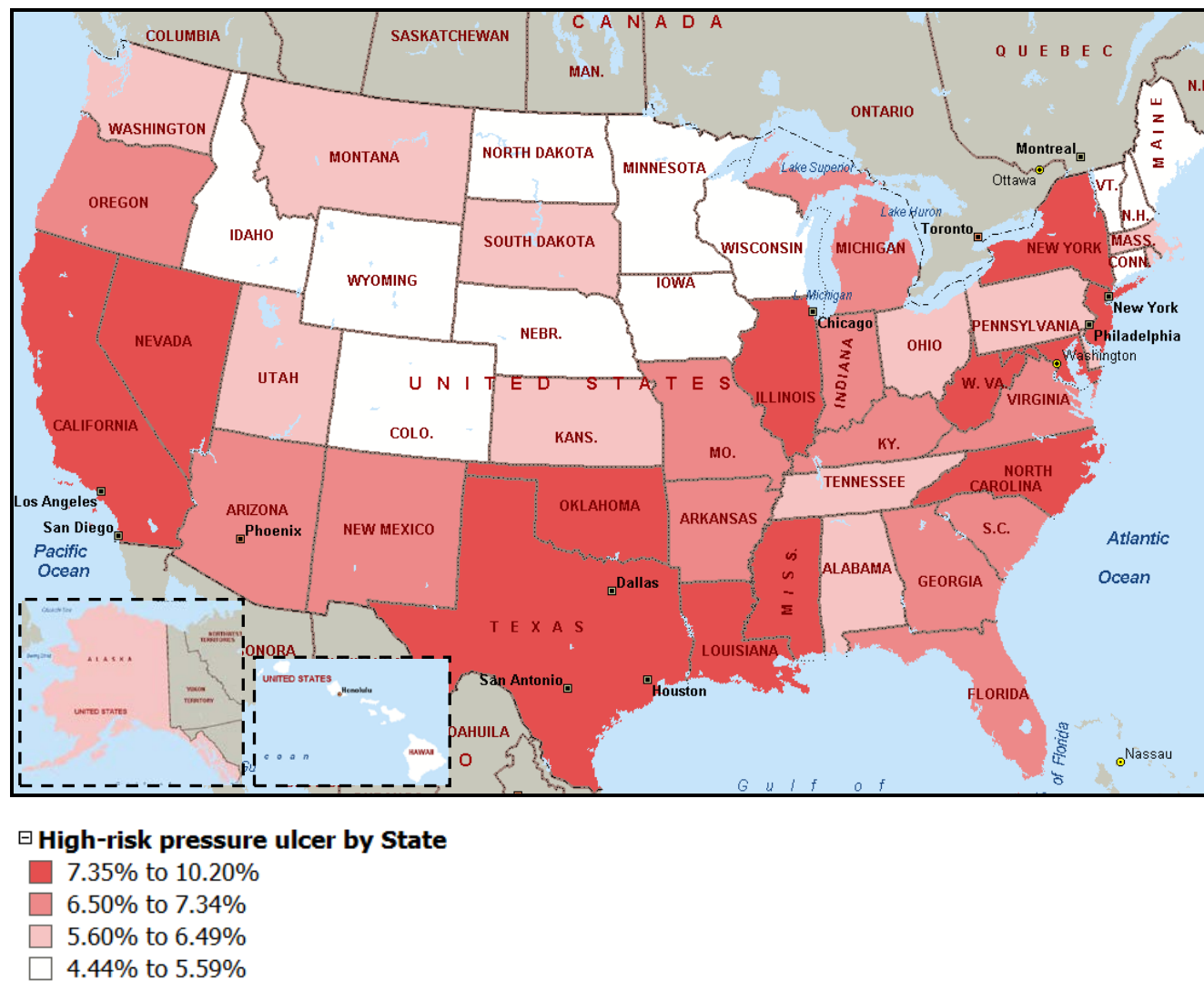
Measure	Description*	Look Back Period**
High Risk Pressure Ulcer	Percent of high-risk residents with pressure ulcers	Past 7 days
Physical Restraint	Percent of residents who were physically restrained	Daily over past 7 days
Indwelling Catheter	Percent of residents who have/had a catheter inserted and left in their bladder	Past 7 days
Urinary Tract Infection	Percent of residents with urinary tract infection	Past 30 days
Falls with Injury	Percent of residents experiencing one or more falls with major injury	Since most recent prior assessment
Depressive Symptoms	Percent of residents who have depressive symptoms	Past 14 days
Influenza Vaccination	Percent of residents assessed and given, appropriately, the seasonal influenza vaccine	October 1 thru March 31
Pneumococcal Vaccination	Percent of residents assessed and given, appropriately, the pneumococcal vaccine	Past 5 years

*For more details on the specifications of nursing home quality measures listed above, please refer to the MDS 3.0 QM User's Manual V8.0. Online: <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Downloads/MDS-30-QM-User's-Manual-V80.pdf>.

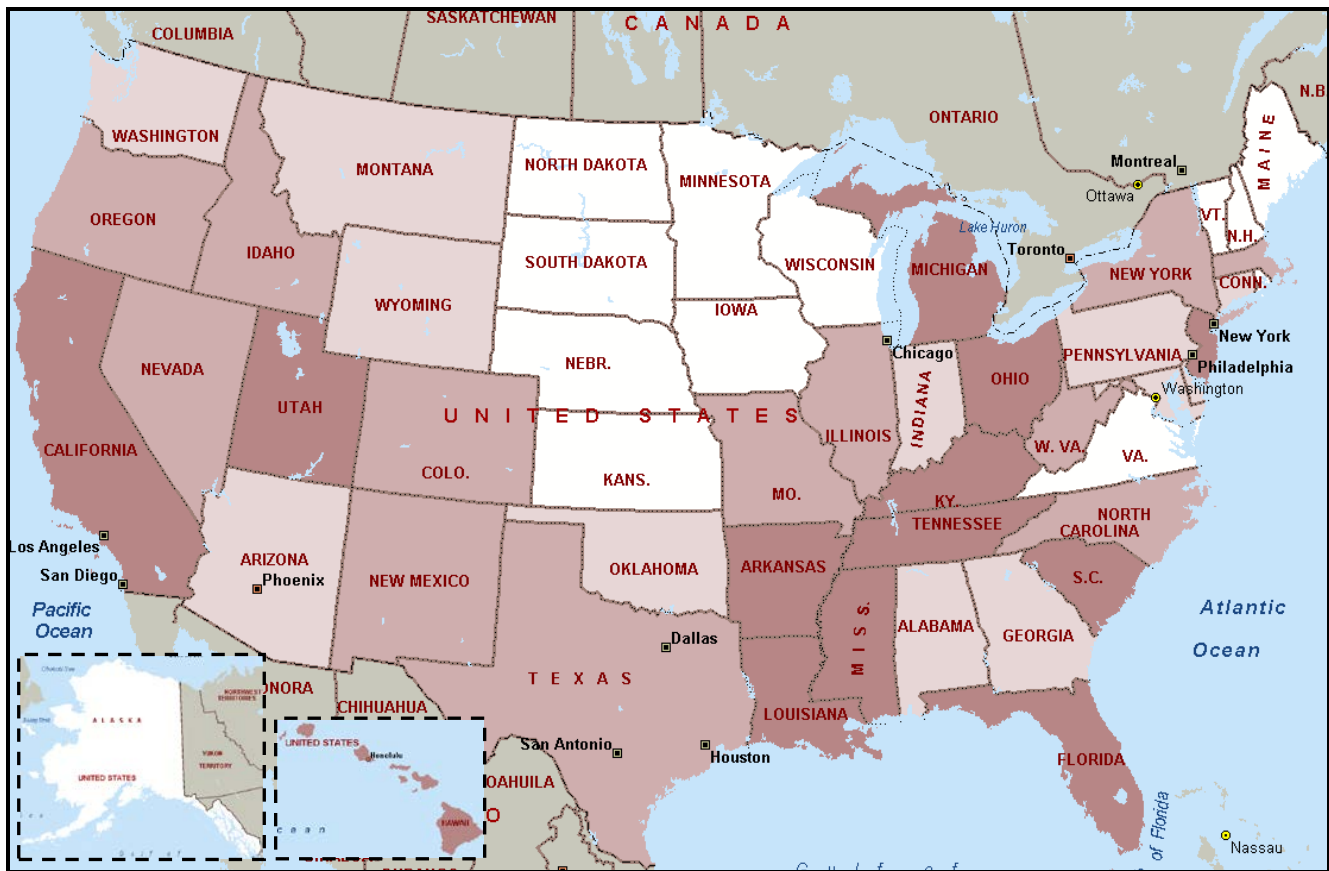
**From the date of the assessment

Appendix B: National Maps by State

Map 1. Percent of high-risk residents with pressure ulcers by state, 2011



Map 2. Percent of residents with physical restraints by state, 2011



Physical restraints by State

- 2.80% to 5.28%
- 1.98% to 2.79%
- 1.40% to 1.97%
- 0.49% to 1.39%

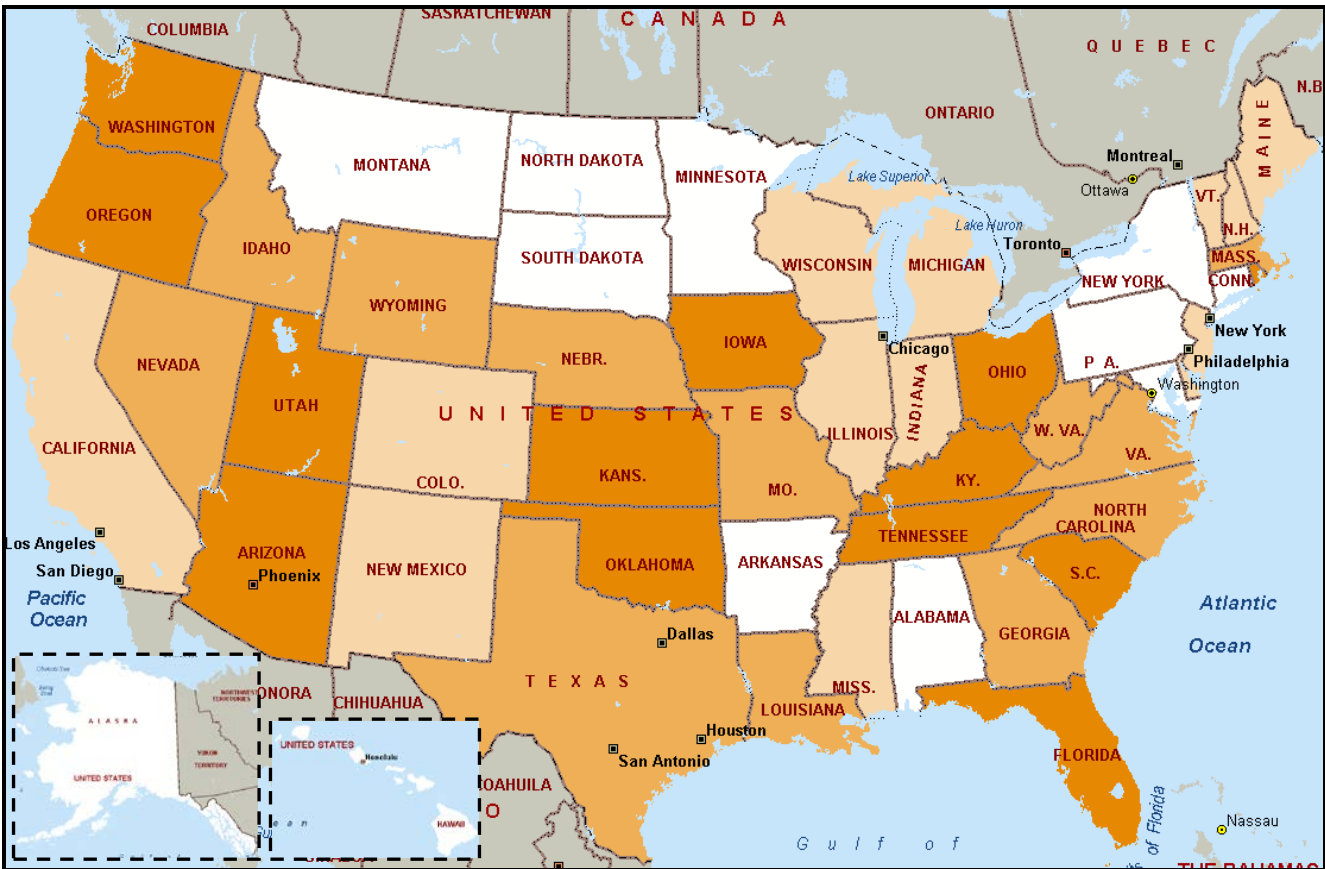
Map 3. Percent of residents who have had a catheter inserted and left in their bladder by state, 2011



□ Catheter inserted & left in bladder by State

- 4.87% to 6.88%
- 4.30% to 4.86%
- 3.65% to 4.29%
- 2.10% to 3.64%

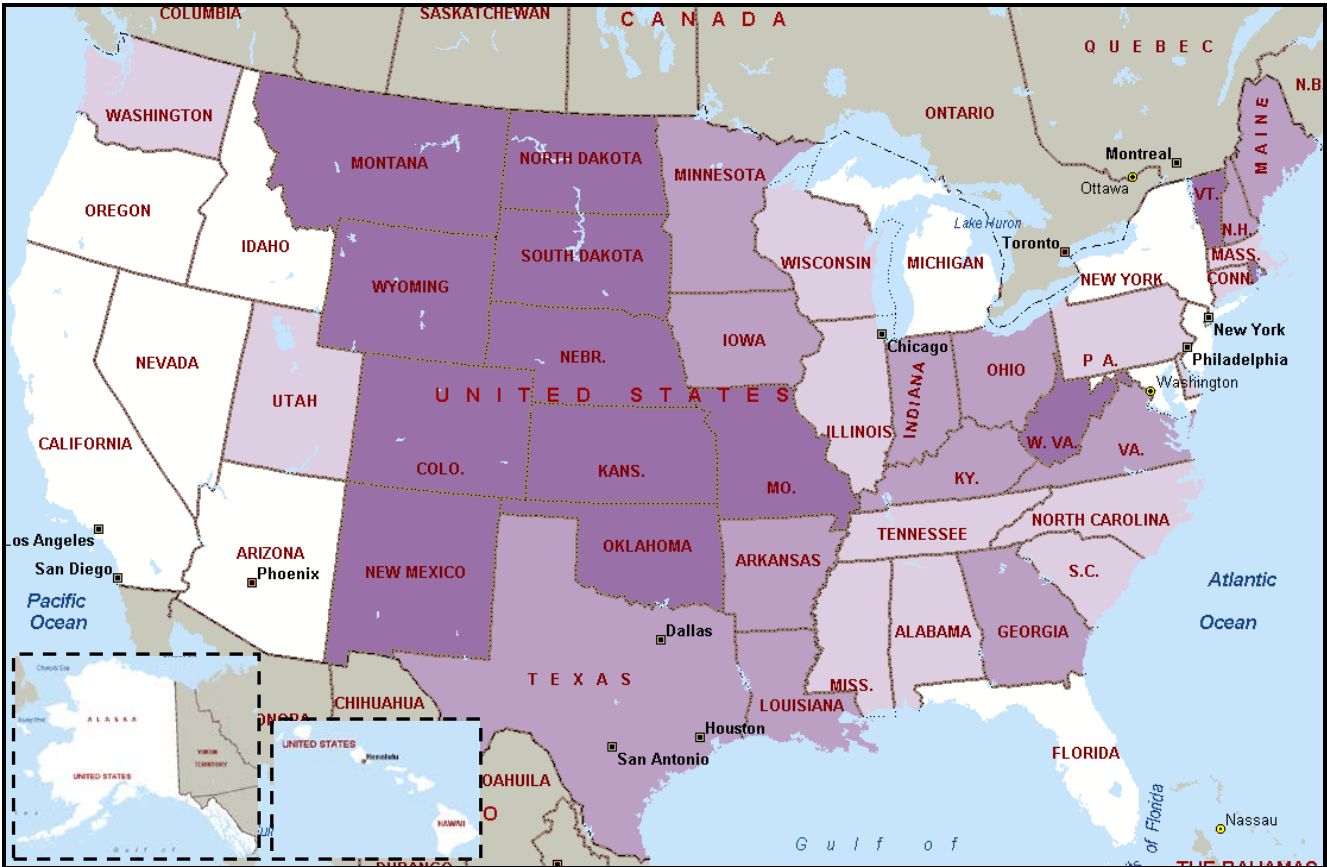
Map 4. Percent of residents with a urinary tract infection (UTI) by state, 2011



Urinary Tract Infection by State

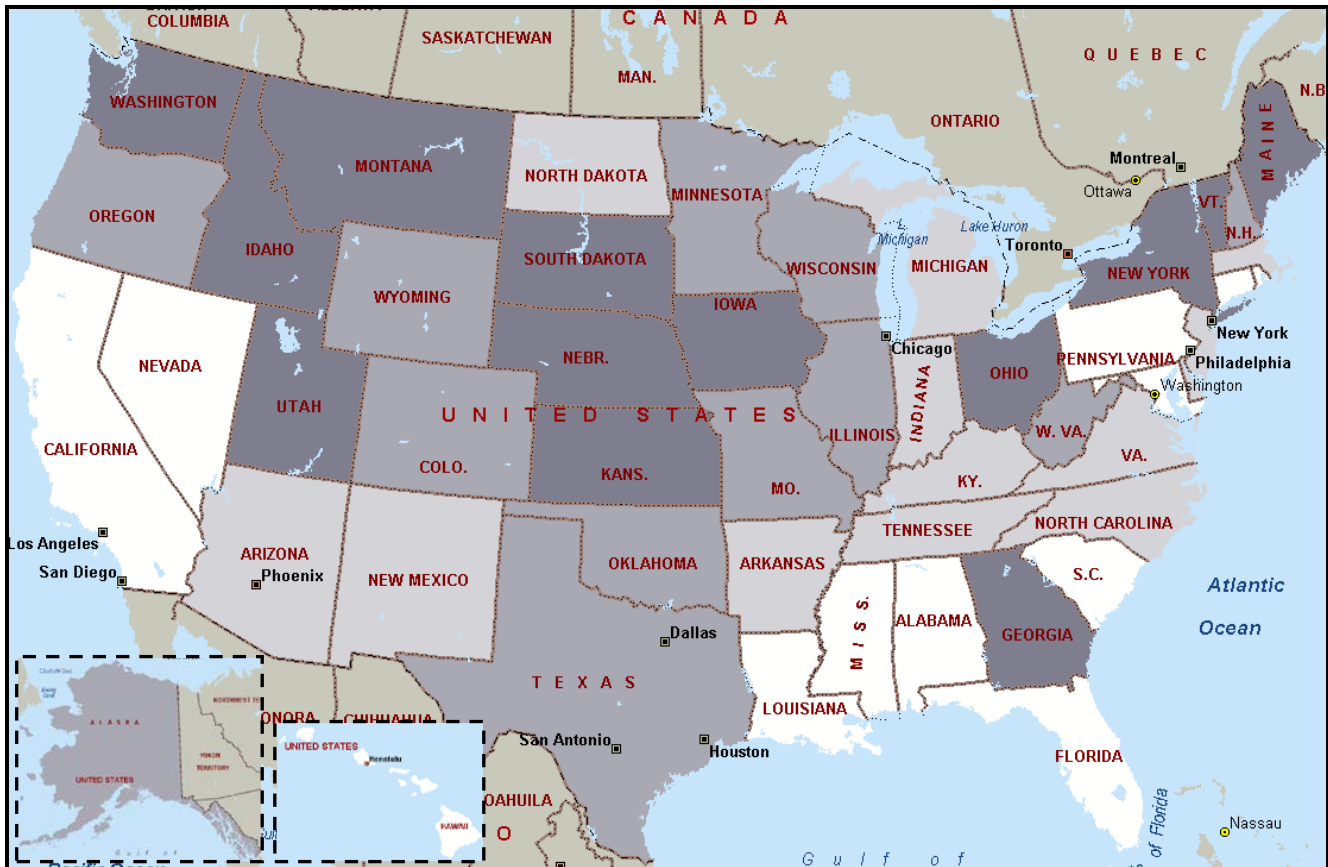
- 8.42% to 9.50%
- 7.40% to 8.41%
- 6.20% to 7.39%
- 5.02% to 6.19%

Map 5. Percent of residents experiencing one or more falls with major injury by state, 2011



- Falls with major injury by State**
- 3.74% to 5.05%
 - 3.15% to 3.73%
 - 2.75% to 3.14%
 - 1.48% to 2.74%

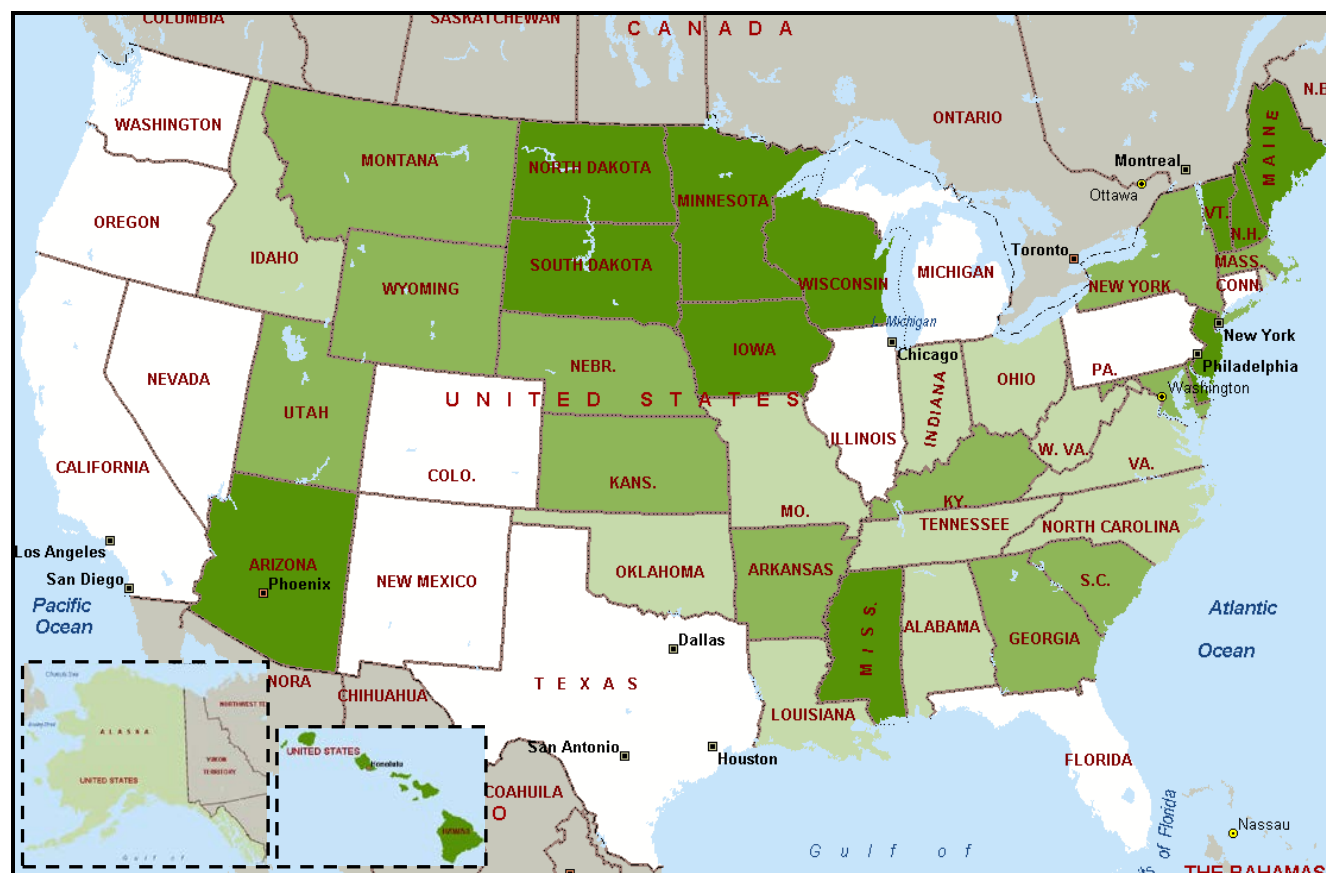
Map 6. Percent of residents who have depressive symptoms by state, 2011



☐ Depression symptoms by State

- 8.60% to 15.04%
 ■ 6.80% to 8.59%
 ■ 4.58% to 6.79%
 ■ 2.18% to 4.57%

Map 7. Percent of residents assessed and appropriately given the seasonal influenza vaccine by state, 2011



Seasonal influenza vaccine by State

- 94.0% to 95.5%
- 92.8% to 93.9%
- 91.4% to 92.7%
- 84.6% to 91.3%

Map 8. Percent of residents assessed and appropriately given the pneumococcal vaccine by state, 2011



■ Pneumococcal vaccine by State

- 96.65% to 98.28%
- 94.60% to 96.64%
- 92.00% to 94.59%
- 78.94% to 91.99%

Appendix C: Detailed National Tables

**Table 1: Percent of high-risk residents with pressure ulcers
by selected demographic characteristics — United States, 2011¹**

Demographics	Level	2011 Quarterly Rates				2011 Average Rate & 95% CLs ²		
		Q1	Q2	Q3	Q4	Percent	Lower CL	Upper CL
Age Group	Total	7.35%	7.09%	6.81%	6.78%	7.00%	6.97%	7.03%
	(1) <65 Yrs	10.37%	10.02%	9.77%	9.65%	9.94%	9.85%	10.04%
	(2) 65 - 74	8.52%	8.27%	8.04%	8.03%	8.21%	8.12%	8.30%
	(3) 75 - 84	7.56%	7.30%	6.87%	6.83%	7.13%	7.08%	7.19%
	(4) 85 - 94	6.37%	6.08%	5.80%	5.73%	5.99%	5.95%	6.04%
	(5) 95+	5.64%	5.33%	5.13%	5.22%	5.34%	5.26%	5.42%
Race/Ethnicity	American Indian/Alaska Native	8.62%	9.44%	9.20%	9.56%	9.21%	8.71%	9.72%
	Asian or NHPI	6.13%	5.76%	5.72%	5.89%	5.87%	5.67%	6.08%
	Black, non-Hispanic	10.37%	10.10%	9.88%	9.77%	10.02%	9.94%	10.11%
	Hispanic or Latino	8.26%	7.88%	7.65%	7.61%	7.84%	7.71%	7.98%
	More than one Race	8.76%	8.39%	9.15%	8.83%	8.79%	8.24%	9.33%
	White, non-Hispanic	6.76%	6.49%	6.20%	6.18%	6.40%	6.37%	6.44%
Gender	Female	6.63%	6.39%	6.12%	6.06%	6.30%	6.27%	6.33%
	Male	9.17%	8.84%	8.50%	8.55%	8.76%	8.70%	8.82%
Urban/Rural Area³	Rural Area	6.73%	6.44%	6.23%	6.20%	6.39%	6.34%	6.45%
	Urban Area	7.54%	7.29%	6.99%	6.96%	7.19%	7.16%	7.22%
Medicare/Medicaid⁴	Medicaid Only	8.65%	8.20%	7.98%	7.98%	8.20%	8.10%	8.30%
	Medicare & Medicaid	7.12%	6.88%	6.57%	6.54%	6.78%	6.74%	6.81%
	Medicare Only	7.47%	7.23%	6.98%	6.94%	7.14%	7.07%	7.20%
	Other Insurance	9.06%	8.24%	8.08%	7.68%	8.22%	8.00%	8.45%

¹Source: DFMC analysis of MDS 3.0 assessment and resident (episode) files for 2011

²Confidence limits

³Indicates whether the facility is CBSA-designated as a rural or urban area

⁴Medicare-Medicaid enrollment is based on the presence of Medicare and/or Medicaid number(s) in the most recent assessment

**Table 2: Percent of residents who were physically restrained
by selected demographic characteristics — United States, 2011¹**

		2011 Quarterly Rates				2011 Average Rate & 95% CLs ²		
Demographics	Level	Q1	Q2	Q3	Q4	Percent	Lower CL	Upper CL
Age Group	Total	2.62%	2.55%	2.50%	2.40%	2.52%	2.50%	2.53%
	(1) <65 Yrs	2.82%	2.70%	2.67%	2.55%	2.68%	2.64%	2.72%
	(2) 65 - 74	2.14%	2.18%	2.11%	2.04%	2.12%	2.08%	2.16%
	(3) 75 - 84	2.76%	2.70%	2.63%	2.52%	2.65%	2.62%	2.68%
	(4) 85 - 94	2.66%	2.56%	2.50%	2.42%	2.54%	2.51%	2.56%
	(5) 95+	2.43%	2.39%	2.35%	2.25%	2.36%	2.31%	2.40%
Race/Ethnicity	American Indian/Alaska Native	2.31%	2.39%	2.44%	2.27%	2.35%	2.15%	2.56%
	Asian or NHPI	3.75%	3.66%	3.57%	3.51%	3.62%	3.49%	3.75%
	Black, non-Hispanic	2.29%	2.29%	2.23%	2.14%	2.24%	2.20%	2.27%
	Hispanic or Latino	3.78%	3.60%	3.43%	3.28%	3.52%	3.45%	3.60%
	More than one Race	2.95%	3.27%	3.07%	3.10%	3.10%	2.83%	3.37%
	White, non-Hispanic	2.58%	2.51%	2.47%	2.37%	2.48%	2.47%	2.50%
Gender	Female	2.62%	2.54%	2.49%	2.40%	2.51%	2.50%	2.53%
	Male	2.62%	2.57%	2.50%	2.39%	2.52%	2.50%	2.55%
Urban/Rural Area³	Rural Area	2.55%	2.51%	2.46%	2.37%	2.48%	2.45%	2.50%
	Urban Area	2.64%	2.57%	2.51%	2.41%	2.53%	2.51%	2.55%
Medicare/Medicaid⁴	Medicaid Only	2.75%	2.69%	2.67%	2.54%	2.66%	2.62%	2.71%
	Medicare & Medicaid	2.65%	2.58%	2.53%	2.45%	2.56%	2.54%	2.57%
	Medicare Only	2.39%	2.30%	2.24%	2.13%	2.26%	2.22%	2.29%
	Other Insurance	2.82%	2.84%	2.63%	2.46%	2.67%	2.57%	2.78%

¹Source: DFMC analysis of MDS 3.0 assessment and resident (episode) files for 2011

²Confidence limits

³Indicates whether the facility is CBSA-designated as a rural or urban area

⁴Medicare-Medicaid enrollment is based on the presence of Medicare and/or Medicaid number(s) in the most recent assessment

Table 3: Percent of residents who have/had a catheter inserted and left in their bladder by selected demographic characteristics — United States, 2011¹

		2011 Quarterly Rates				2011 Average Rate & 95% CLs ²		
Demographics	Level	Q1	Q2	Q3	Q4	Percent	Lower CL	Upper CL
Age Group	Total	4.24%	4.18%	4.17%	4.10%	4.17%	4.15%	4.19%
	(1) <65 Yrs	5.99%	5.89%	5.78%	5.70%	5.84%	5.78%	5.90%
	(2) 65 - 74	5.20%	5.12%	5.03%	4.90%	5.06%	5.00%	5.11%
	(3) 75 - 84	4.48%	4.40%	4.33%	4.22%	4.36%	4.32%	4.39%
	(4) 85 - 94	3.51%	3.43%	3.46%	3.41%	3.45%	3.42%	3.48%
	(5) 95+	2.61%	2.54%	2.59%	2.52%	2.57%	2.52%	2.62%
Race/Ethnicity	American Indian/Alaska Native	5.24%	5.29%	5.36%	4.91%	5.20%	4.89%	5.51%
	Asian or NHPI	3.38%	3.51%	3.45%	3.33%	3.42%	3.29%	3.55%
	Black, non-Hispanic	4.42%	4.36%	4.36%	4.30%	4.36%	4.31%	4.41%
	Hispanic or Latino	4.20%	4.11%	4.23%	4.16%	4.18%	4.09%	4.26%
	More than one Race	3.92%	4.09%	4.09%	4.28%	4.10%	3.78%	4.41%
	White, non-Hispanic	4.22%	4.16%	4.14%	4.07%	4.15%	4.12%	4.17%
Gender	Female	3.19%	3.16%	3.13%	3.07%	3.14%	3.12%	3.16%
	Male	6.64%	6.51%	6.51%	6.42%	6.52%	6.48%	6.56%
Urban/Rural Area³	Rural Area	4.28%	4.23%	4.19%	4.10%	4.20%	4.16%	4.24%
	Urban Area	4.23%	4.17%	4.16%	4.10%	4.16%	4.14%	4.19%
Medicare/Medicaid⁴	Medicaid Only	4.73%	4.68%	4.68%	4.54%	4.66%	4.60%	4.72%
	Medicare & Medicaid	3.99%	3.96%	3.92%	3.82%	3.92%	3.90%	3.94%
	Medicare Only	4.89%	4.66%	4.69%	4.67%	4.72%	4.68%	4.77%
	Other Insurance	5.92%	5.64%	5.46%	5.61%	5.65%	5.49%	5.81%

¹Source: DFMC analysis of MDS 3.0 assessment and resident (episode) files for 2011

²Confidence limits

³Indicates whether the facility is CBSA-designated as a rural or urban area

⁴Medicare-Medicaid enrollment is based on the presence of Medicare and/or Medicaid number(s) in the most recent assessment

**Table 4: Percent of residents with a urinary tract infection (UTI)
by selected demographic characteristics — United States, 2011¹**

		2011 Quarterly Rates				2011 Average Rate & 95% CLs ²		
Demographics	Level	Q1	Q2	Q3	Q4	Percent	Lower CL	Upper CL
Age Group	Total	7.11%	7.29%	7.45%	7.36%	7.30%	7.28%	7.33%
	(1) <65 Yrs	5.31%	5.44%	5.50%	5.65%	5.48%	5.42%	5.53%
	(2) 65 - 74	6.40%	6.56%	6.83%	6.79%	6.65%	6.59%	6.71%
	(3) 75 - 84	7.64%	7.83%	8.00%	7.84%	7.83%	7.78%	7.88%
	(4) 85 - 94	7.75%	7.94%	8.12%	8.01%	7.96%	7.91%	8.00%
	(5) 95+	6.86%	7.15%	7.31%	7.06%	7.09%	7.01%	7.17%
Race/Ethnicity	American Indian/Alaska Native	6.75%	6.59%	6.66%	6.34%	6.58%	6.24%	6.92%
	Asian or NHPI	5.48%	5.83%	5.50%	5.52%	5.58%	5.42%	5.75%
	Black, non-Hispanic	5.29%	5.41%	5.53%	5.44%	5.42%	5.36%	5.47%
	Hispanic or Latino	6.36%	6.29%	6.59%	6.65%	6.47%	6.37%	6.58%
	More than one Race	6.85%	6.84%	7.63%	6.95%	7.07%	6.67%	7.47%
	White, non-Hispanic	7.53%	7.74%	7.92%	7.82%	7.75%	7.72%	7.78%
Gender	Female	7.84%	8.08%	8.25%	8.14%	8.08%	8.05%	8.11%
	Male	5.49%	5.55%	5.71%	5.66%	5.60%	5.57%	5.64%
Urban/Rural Area³	Rural Area	7.24%	7.41%	7.80%	7.71%	7.54%	7.49%	7.59%
	Urban Area	7.07%	7.25%	7.34%	7.24%	7.23%	7.20%	7.25%
Medicare/Medicaid⁴	Medicaid Only	5.51%	5.62%	5.68%	5.65%	5.62%	5.55%	5.68%
	Medicare & Medicaid	7.06%	7.23%	7.41%	7.24%	7.23%	7.21%	7.26%
	Medicare Only	8.38%	8.59%	8.69%	8.69%	8.60%	8.54%	8.66%
	Other Insurance	7.33%	7.43%	7.60%	7.37%	7.43%	7.26%	7.61%

¹Source: DFMC analysis of MDS 3.0 assessment and resident (episode) files for 2011

²Confidence limits

³Indicates whether the facility is CBSA-designated as a rural or urban area

⁴Medicare-Medicaid enrollment is based on the presence of Medicare and/or Medicaid number(s) in the most recent assessment

**Table 5: Percent of residents experiencing one or more falls with major injury
by selected demographic characteristics — United States, 2011¹**

		2011 Quarterly Rates				2011 Average Rate & 95% CLs ²		
Demographics	Level	Q1	Q2	Q3	Q4	Percent	Lower CL	Upper CL
Age Group	Total	2.40%	3.12%	3.40%	3.29%	3.06%	3.04%	3.07%
	(1) <65 Yrs	1.33%	1.73%	1.88%	1.82%	1.69%	1.66%	1.72%
	(2) 65 - 74	1.91%	2.48%	2.66%	2.60%	2.42%	2.38%	2.46%
	(3) 75 - 84	2.49%	3.23%	3.51%	3.42%	3.17%	3.13%	3.20%
	(4) 85 - 94	2.82%	3.72%	4.08%	3.94%	3.64%	3.61%	3.67%
	(5) 95+	2.79%	3.68%	4.08%	3.97%	3.60%	3.55%	3.66%
Race/Ethnicity	American Indian/Alaska Native	2.86%	3.78%	3.77%	3.73%	3.54%	3.29%	3.79%
	Asian or NHPI	1.77%	2.14%	2.30%	2.16%	2.10%	2.00%	2.20%
	Black, non-Hispanic	1.03%	1.34%	1.45%	1.37%	1.30%	1.27%	1.33%
	Hispanic or Latino	1.95%	2.48%	2.55%	2.43%	2.36%	2.29%	2.42%
	More than one Race	1.99%	2.58%	2.73%	2.75%	2.52%	2.28%	2.76%
	White, non-Hispanic	2.69%	3.52%	3.85%	3.73%	3.45%	3.43%	3.47%
Gender	Female	2.66%	3.49%	3.81%	3.69%	3.41%	3.40%	3.43%
	Male	1.82%	2.32%	2.51%	2.42%	2.27%	2.25%	2.29%
Urban/Rural Area³	Rural Area	2.82%	3.79%	4.15%	4.07%	3.71%	3.67%	3.74%
	Urban Area	2.26%	2.91%	3.16%	3.04%	2.84%	2.82%	2.86%
Medicare/Medicaid⁴	Medicaid Only	1.63%	2.09%	2.28%	2.13%	2.04%	2.00%	2.08%
	Medicare & Medicaid	2.36%	3.12%	3.42%	3.31%	3.05%	3.03%	3.07%
	Medicare Only	3.07%	3.81%	4.05%	3.92%	3.73%	3.69%	3.77%
	Other Insurance	2.23%	2.81%	2.88%	2.76%	2.69%	2.58%	2.79%

¹Source: DFMC analysis of MDS 3.0 assessment and resident (episode) files for 2011

²Confidence limits

³Indicates whether the facility is CBSA-designated as a rural or urban area

⁴Medicare-Medicaid enrollment is based on the presence of Medicare and/or Medicaid number(s) in the most recent assessment

**Table 6: Percent of residents who have depressive symptoms
by selected demographic characteristics — United States, 2011¹**

		2011 Quarterly Rates				2011 Average Rate & 95% CLs ²		
Demographics	Level	Q1	Q2	Q3	Q4	Percent	Lower CL	Upper CL
Age Group	Total	6.78%	6.60%	6.62%	7.10%	6.77%	6.75%	6.80%
	(1) <65 Yrs	6.76%	6.53%	6.81%	7.44%	6.89%	6.83%	6.95%
	(2) 65 - 74	6.61%	6.53%	6.74%	7.32%	6.81%	6.74%	6.87%
	(3) 75 - 84	6.82%	6.62%	6.59%	7.04%	6.77%	6.72%	6.81%
	(4) 85 - 94	6.76%	6.57%	6.48%	6.87%	6.67%	6.63%	6.71%
	(5) 95+	7.03%	6.87%	6.78%	7.27%	6.98%	6.90%	7.06%
Race/Ethnicity	American Indian/Alaska Native	6.14%	6.20%	5.91%	6.65%	6.22%	5.89%	6.56%
	Asian or NHPI	4.38%	4.25%	4.25%	4.97%	4.46%	4.32%	4.61%
	Black, non-Hispanic	4.59%	4.65%	4.87%	5.73%	4.97%	4.91%	5.02%
	Hispanic or Latino	5.35%	5.40%	5.35%	5.95%	5.51%	5.42%	5.61%
	More than one Race	6.51%	6.58%	7.19%	7.86%	7.04%	6.64%	7.45%
	White, non-Hispanic	7.33%	7.09%	7.07%	7.47%	7.24%	7.21%	7.26%
Gender	Female	6.92%	6.70%	6.68%	7.15%	6.86%	6.83%	6.89%
	Male	6.47%	6.38%	6.48%	6.99%	6.58%	6.54%	6.62%
Urban/Rural Area³	Rural Area	7.90%	7.71%	7.75%	7.97%	7.83%	7.78%	7.88%
	Urban Area	6.41%	6.23%	6.24%	6.81%	6.42%	6.40%	6.45%
Medicare/Medicaid⁴	Medicaid Only	6.42%	6.18%	6.36%	7.12%	6.53%	6.45%	6.60%
	Medicare & Medicaid	6.66%	6.51%	6.56%	7.07%	6.70%	6.67%	6.73%
	Medicare Only	7.53%	7.17%	6.97%	7.15%	7.19%	7.14%	7.25%
	Other Insurance	7.14%	7.12%	6.66%	7.20%	7.03%	6.86%	7.20%

¹Source: DFMC analysis of MDS 3.0 assessment and resident (episode) files for 2011

²Confidence limits

³Indicates whether the facility is CBSA-designated as a rural or urban area

⁴Medicare-Medicaid enrollment is based on the presence of Medicare and/or Medicaid number(s) in the most recent assessment

Table 7: Percent of residents assessed and appropriately given the seasonal influenza vaccine by selected demographic characteristics — United States, 2011¹

		2011 Quarterly Rates				2011 Average Rate & 95% CLs ²		
Demographics	Level	Q1	Q2	Q3	Q4	Percent	Lower CL	Upper CL
Age Group	Total	95.25%	93.99%	88.72%	89.02%	91.77%	91.75%	91.80%
	(1) <65 Yrs	93.27%	91.96%	87.56%	87.84%	90.14%	90.07%	90.21%
	(2) 65 - 74	94.23%	93.02%	88.27%	88.20%	90.91%	90.83%	90.98%
	(3) 75 - 84	95.22%	94.01%	88.73%	88.89%	91.71%	91.66%	91.75%
	(4) 85 - 94	96.07%	94.79%	89.11%	89.73%	92.48%	92.44%	92.52%
	(5) 95+	96.59%	95.41%	89.78%	89.96%	93.12%	93.04%	93.20%
Race/Ethnicity	American Indian/Alaska Native	94.65%	92.66%	86.99%	87.27%	90.41%	90.01%	90.81%
	Asian or NHPI	95.09%	93.96%	90.03%	90.22%	92.32%	92.13%	92.51%
	Black, non-Hispanic	92.07%	91.00%	86.96%	85.84%	88.98%	88.90%	89.06%
	Hispanic or Latino	92.21%	91.47%	86.92%	86.83%	89.36%	89.23%	89.49%
	More than one Race	94.58%	93.74%	88.74%	87.72%	91.19%	90.75%	91.63%
	White, non-Hispanic	96.07%	94.74%	89.19%	89.80%	92.48%	92.46%	92.51%
Gender	Female	95.56%	94.32%	88.95%	89.20%	92.04%	92.01%	92.07%
	Male	94.57%	93.26%	88.24%	88.62%	91.20%	91.15%	91.24%
Urban/Rural Area³	Rural Area	97.08%	95.77%	90.83%	91.71%	93.87%	93.83%	93.92%
	Urban Area	94.65%	93.40%	88.03%	88.13%	91.08%	91.05%	91.11%
Medicare/Medicaid⁴	Medicaid Only	93.55%	92.28%	87.88%	87.88%	90.41%	90.33%	90.49%
	Medicare & Medicaid	95.41%	94.21%	89.09%	89.07%	92.02%	91.99%	92.05%
	Medicare Only	95.88%	94.33%	87.96%	89.60%	91.82%	91.76%	91.88%
	Other Insurance	93.10%	92.09%	86.61%	87.78%	89.77%	89.57%	89.98%

¹Source: DFMC analysis of MDS 3.0 assessment and resident (episode) files for 2011

²Confidence limits

³Indicates whether the facility is CBSA-designated as a rural or urban area

⁴Medicare-Medicaid enrollment is based on the presence of Medicare and/or Medicaid number(s) in the most recent assessment

Table 8: Percent of residents assessed and appropriately given the pneumococcal vaccine by selected demographic characteristics — United States, 2011¹

		2011 Quarterly Rates				2011 Average Rate & 95% CLs ²		
Demographics	Level	Q1	Q2	Q3	Q4	Percent	Lower CL	Upper CL
Age Group	Total	93.98%	94.05%	93.56%	93.58%	93.79%	93.77%	93.82%
	(1) <65 Yrs	90.51%	90.58%	89.98%	90.01%	90.26%	90.19%	90.33%
	(2) 65 - 74	93.02%	93.12%	92.57%	92.61%	92.82%	92.76%	92.89%
	(3) 75 - 84	94.16%	94.29%	93.76%	93.83%	94.01%	93.97%	94.05%
	(4) 85 - 94	95.11%	95.18%	94.79%	94.83%	94.98%	94.94%	95.01%
	(5) 95+	95.73%	95.87%	95.63%	95.63%	95.72%	95.65%	95.78%
Race/Ethnicity	American Indian/Alaska Native	92.05%	91.66%	91.33%	91.58%	91.65%	91.28%	92.02%
	Asian or NHPI	94.88%	94.92%	94.46%	94.45%	94.67%	94.52%	94.83%
	Black, non-Hispanic	90.65%	90.64%	90.07%	90.13%	90.37%	90.30%	90.44%
	Hispanic or Latino	91.06%	91.45%	90.71%	90.51%	90.93%	90.81%	91.05%
	More than one Race	92.90%	92.87%	92.45%	92.18%	92.60%	92.19%	93.00%
	White, non-Hispanic	94.82%	94.90%	94.45%	94.48%	94.66%	94.64%	94.68%
Gender	Female	94.47%	94.56%	94.12%	94.13%	94.32%	94.29%	94.35%
	Male	92.92%	92.93%	92.34%	92.38%	92.64%	92.60%	92.68%
Urban/Rural Area³	Rural Area	95.78%	95.71%	95.25%	95.37%	95.53%	95.49%	95.56%
	Urban Area	93.39%	93.50%	93.00%	92.99%	93.22%	93.19%	93.25%
Medicare/Medicaid⁴	Medicaid Only	91.14%	91.19%	90.63%	90.77%	90.93%	90.85%	91.01%
	Medicare & Medicaid	94.37%	94.46%	94.11%	94.18%	94.28%	94.25%	94.30%
	Medicare Only	94.39%	94.38%	93.48%	93.42%	93.88%	93.83%	93.94%
	Other Insurance	91.50%	91.78%	90.57%	90.16%	90.94%	90.76%	91.13%

¹Source: DFMC analysis of MDS 3.0 assessment and resident (episode) files for 2011

²Confidence limits

³Indicates whether the facility is CDSA-designated as a rural or urban area

⁴Medicare-Medicaid enrollment is based on the presence of Medicare and/or Medicaid number(s) in the most recent assessment